made by these people. But so far as I am aware, no one has attempted to solve this problem directly by a consideration of the fossil remains of man himself. The evidence of asymmetry of the brain to which I have called attention throws a light on this problem that is much more reliable than any inference which can be made from man's handiwork.

The question naturally suggests itself whether there is any trace of asymmetry in the anthropoid apes. Although the two cerebral hemispheres in the anthropoid apes are approximately symmetrical, and do not reveal the obtrusive asymmetry found in most human beings, the superior longitudinal sinus does not always split into branches of equal size as so frequently happens in the lower apes. Though there is no obvious asymmetry of the brain, there seems to be in the (apparently ambidextrous) anthropoid apes an instability that affects the symmetry of the limbs, although neither the right nor the left is so definitely selected as in the case of the vast majority of human beings.

Taking into consideration the fact that the cortical territory concerned in the causation of this lunate asymmetrical sulcus is the visual area, it is of some interest to note that B. S. Parson, in his book *Left-handedness* (1924), came to the conclusion that the ocular dominance—that is, the use of one eye for fixation—determines both cerebral dominance and the "handedness" of the individual.

The apparent asymmetry of the visual cortex, (that of the left side associated with the right field of vision appearing to be considerably bigger than the right,) at one time deceived me into believing that the *area striata* was actually bigger on the left than on the right side. But careful measurement of this region in the two hemispheres ultimately convinced me that appearances were illusory, the apparent difference being due, not to the contrast between the visual areas of the two hemispheres, but to the mode of packing. The larger parietal area on the right hemisphere usually pushes back the *area striata* further than happens on the left.†

It must be remembered in such investigations that congenital tendencies may in many cases be overcome to a considerable extent by training; so that it is possible to get a brain showing the asymmetry distinctive of left-handedness with limbs which show the conditions usually associated with right-handedness.

†See *Anat. Anzeiger*, 1907, Bd. xxx, p. 574.

NOVASUROL

IN a recent number of the *Journal of the American Medical Association* Dr. Rowntree and his associates report the success which has followed their employment of *novasurol*, a double salt of sodium mercurichlor-phenyl oxycetate with diethyl barbituric acid. (barbitone), which contains nearly thirty-four per cent of mercury. It was introduced at first as a remedy for syphilis; its most important use however would appear to be as a diuretic. For some time past the milder compounds of mercury have been recommended as diuretics in cases of ascites due more to cardiac than to nephritic failure. Novasurol has an advantage over metallic mercury in that it is freely soluble in water, and may be administered by subcutaneous, intramuscular or intravenous injection. The drug first proved efficacious in some cases of cardiac dropsy, succeeding in cases in which digitalis and the purin derivatives failed. As the result of his experience with it Rowntree considers that it will unquestionably play an important part in the future in the treatment not only of cardiac, but also of nephritic œdema. German clinicians have shown that novasurol produces a relative and absolute increase in the excretion of the chlorides in the urine. Keith and Whelan also found that under the influence of this drug there was a relative and absolute increase in the out-

put of sodium in the urine. Previous experiments appeared to indicate that novasurol in cases of ascites and œdema arising from portal cirrhosis gave unsatisfactory results, and that sometimes headache and vomiting followed its use. Rowntree and Barrier however have reported excellent results in several cases of cirrhosis of the liver and of Banti's disease.

The clinical material which served as the basis of Rowntree's report comprised twenty cases in all, and included ten cases of portal cirrhosis, two of portal cirrhosis and cardiac decompensation, two of syphilitic cirrhosis, two of Banti's disease, two of neoplastic disease with metastases in the liver, one of polyserositis, and one of polycythemia with chronic endocarditis and myocardial insufficiency. In all of these cases the ascites was marked, and in most of them constituted an outstanding clinical feature. Cardiac and renal insufficiency was demonstrated in all but three, but in these three such undoubtedly constituted a factor in the causation of the œdema. The medical treatment of these cases consisted in the restriction of water and salt, the control of diet, and the use of diuretic drugs. Novasurol used alone in some of the cases gave striking results. When combined with the administration of ammonium chloride by the mouth and at the same time with a controlled diet of a fixed low water and low salt content, the best results were obtained. Novasurol was given in doses up to 2 c.c. intramuscularly or intravenously at intervals of from three days to a week. Its tolerance was first determined by the administration intramuscularly of from 0.5 to 0.75 c.c. Ammonium chloride was administered in divided doses up to ten grammes daily and was found to be best given in crystalline form in capsules of 0.75 or 1.50 grammes. In nineteen of the twenty cases diuresis resulted from this treatment. In eight of the cases the urinary excretion of chlorine and sodium was relatively and absolutely increased; that of potassium and calcium was usually increased. The total output of urea, ammonia, and total nitrogen was also slightly increased.

The diuresis arising from the administration of novasurol combined with the ammonium chloride appeared to be due chiefly to the increased chlorine in the tissues, rather than to any decrease in the alkali reserve. Novasurol undoubtedly produces an increased excretion of sodium and chlorine in the urine. Whether the seat of this action is in the kidney only, in the tissues generally, or in both, has yet to be determined and further experimental work is required. Novasurol in the ten cases of cirrhosis of the liver in this series caused diuresis in all. Repeated periods of diuresis have brought about the disappearance of the ascites and of the œdema in seven cases, and to a large extent also the evidences of the collateral circulation. The patients have improved remarkably in health and strength, and the result must be regarded as excellent. In both cases of Banti's disease the ascites was extreme, and in both there had been many previous tappings. They both responded to novasurol with results little short of marvellous. In ascites associated with syphilis of the liver, novasurol was remarkably efficacious, and in one case reported in which myocardial degeneration, cirrhosis of the liver, and renal insufficiency were all definitely present, the fact that novasurol was so efficacious would indicate that not one of these conditions is a contra-indication to its use.

The results obtained under the use of novasurol in this series of cases, Rowntree considers as unquestionably better than the results from any other method of treatment. Restriction of water is indicated and is of undoubted value. The question may be raised of the advisability of forcing water intake in cases of cirrhosis prior to the appearance of ascites, a practice advocated in some of our leading textbooks of medicine of today.

With the clearing up of the ascites in portal cirrhosis the general health and strength are markedly improved; the abdominal collateral channels disappear almost entirely, and the patients according to these reporters passed from a condition of serious illness to one closely approaching normal. In view however

of previous experience reported in the literature in which both lack of effect and actual harm have been reported, it is obvious care must be exercised in following the course of events as treatment is being given.

REHABILITATION OF THE TUBERCULOUS

REHABILITATION of those suffering from tuberculosis is a project which has been before anti-tuberculosis workers ever since Sir Robert Philip of Edinburgh outlined many years ago his famous community organization centered around a well equipped, efficiently manned (as to medical personnel) dispensary. The most successful effort to meet this particular want in the programme has been devised and operated near Cambridge, England, by Varrier-Jones and his deceased senior, Sims Woodhead, at Papworth. They claim, that by the forms of employment devised, they are able to make the colony self-supporting. If this is true even by utilizing any grants available by law, and by not charging interest or sinking fund on capital account, it is a wonderful success. It provides accommodation for the family of an arrested tuberculous case. It has bed accommodation for those who slip back under strict medical and nursing supervision and secures for those fit employment suited to the individual, and his home conditions. There have been other much smaller and less complete efforts in England but also less successful. The National Tuberculosis Association of the United States, inaugurated a colony undertaking last summer, which may by this time be accepting cases. The Reco Shop, started in New York City, to train men in suitable employments, has been closed. The Altro Shop, operated by the Hebrew Charities for arrested tuberculous cases is still working, but it does not provide homes, or remove the cases into open country surroundings. The Standard Oil Company of California, have a successful scheme for their employees at Colfax. The New York State Telephone Company treat and rehabilitate their cases of tuberculosis, and both these corporations state it pays them. The arrested tuberculous case must have support for his family while he gradually acquires the ability to work long enough hours to support them, at a type of work medically suitable, and under congenial surroundings with fellow employees who will not shun him, or otherwise unnecessarily embarrass his willing and anxious efforts. A conscientious arrested case of tuberculosis from a Sanatorium is not a menace to fellow workers.

P. E. WODEHOUSE

HÆMORRHAGE IN PULMONARY TUBERCULOSIS

IN an interesting article by Dr. F. M. Pottinger of California (*Amer. Journal of the Medical Sciences*, September, 1925), the etiology of hæmorrhage in pulmonary tuberculosis is discussed. It was formerly generally accepted that blood in the sputum pointed to destruction of a portion of the wall of a pulmonary vessel. Careful investigation, however, shows that blood coming from the lungs does not always indicate the same underlying condition. Ulceration of the wall of a vessel, and rupture of an aneurysmal dilatation of a vessel in the unprotected wall of a cavity may occur now and then and cause severe and even fatal hæmorrhage. Injury to the walls of tiny capillaries is also a frequent cause of bleeding, but the great majority of pulmonary hæmorrhages do not appear to